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Agriculture development and food security

Report of the Secretary-General

Summary

The impacts of the 2008 food crisis have been complex and far-reaching, increasing the number of hungry and undernourished people in the world and jeopardizing the progress made in achieving internationally agreed development goals. Climate change, energy needs, diminishing natural resources and ailing or outdated market systems all are factors that affect the ability to respond to the food security challenge in a strategic and systematic manner. The global consensus has produced a strategic framework for action that includes short-term amelioratory measures and long-term structural solutions, which need to be undertaken in the form of an integrated, sustainable development strategy. Such a strategy would build upon and sustain current initiatives to address the crisis and place it in the context of a comprehensive and coordinated response at all levels. Stimulating economic growth in rural areas will positively influence poverty reduction and food security. This could be achieved by enhancing agricultural productivity; making a sustainable green revolution a reality; promoting cooperation for mobilizing new and additional resources; and investing in rural infrastructure, research and development, and in the technical and social capacities of government agencies as well as local communities.

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I. Introduction

1. The present report has been prepared in response to the request made by the General Assembly in its resolution 63/235 that the Secretary-General submit to the Assembly at its sixty-fourth session a report on national, regional and international efforts to address agriculture development and food security within the context of national and international development policies, under the item entitled "Agriculture development and food security".

2. The report benefited from inputs received from the organizations of the United Nations system, in particular the Food and Agriculture Organization of the United Nations (FAO) and the International Fund for Agricultural Development (IFAD), and from the analysis and conclusions presented in the Comprehensive Framework for Action developed by the High-level Task Force on the Global Food Security Crisis[1] in July 2008, and in the outline of progress against the Comprehensive Framework for Action published by the Task Force secretariat in July 2009. It also draws upon the outcomes of the sixteenth and seventeenth sessions of the Commission on Sustainable Development that pertain to agriculture and rural development.

3. The issue of food security was brought into sharp focus by the succession of shocks that hit the world economy in 2008, including energy price volatility, the rapid escalation of food and commodity prices, the financial crisis and the ensuing economic recession. However, the structural causes of food insecurity are not new. The global system of agriculture, food production and natural resource management suffers from a number of problems:

(a) There is enough food to provide everyone in the world with a balanced and healthy diet, food production has grown steadily over a half-century, and yet hunger and malnutrition persist and are widespread;

(b) Second, as evidenced by the 2008 situation, food security has systematically been at risk from price volatility, especially, but not exclusively, with respect to food grains. The global community recognized this problem as long ago as 1962, with the international development strategy, calling for commodity price stabilization as a key plank of development;

(c) Third, trends indicate a widening gap between the increasingly rapid growth in the demand for more resource-intensive food commodities and the slower growth in yields in food production;

(d) Fourth, demand is also projected to grow for alternative uses of land and water, especially for the rehabilitation of ecosystem services (including expanding the forest cover and protecting soils), as well as for non-food production (including the growing demand for bioenergy products);

(e) Fifth, climate change is projected to have fairly widespread and, on balance, adverse impacts on global agriculture;

[1] More information on the High-level Task Force on the Global Food Security Crisis and the Comprehensive Framework for Action is available at www.un-foodsecurity.org.

(f) Sixth, there is a tremendous amount of experience and learning about best practices in the areas of the sustainable and equitable management of soils, water, biodiversity, participatory practices and rural development, which for one reason or another, have failed to be utilized on a sufficiently wide scale. A major policy goal is to create conditions in which such practices are used on a universal scale;

(g) Seventh, for ecological and institutional reasons, Africa did not experience the green revolution, and yields remain much below those of other regions;

(h) Finally, the green revolution that took place in other regions is based on unsustainable methods that overuse fossil energy resources as well as chemicals and water. There is now a need to go beyond overuse into a more sustainable phase of the green revolution.

4. Policy documents and analyses going back several decades refer to some or all of those problems over and over again. Yet, like the poor, they are still with us.

5. This poses a dual challenge to the policy community (see box 1 below). On the one hand, policies and responses need to be put in place that address the current food security crisis; these will consist mainly of social safety nets and other means of protecting poor and vulnerable communities from deprivation. On the other hand, there is a need to consider longer-term measures, including investment in a new, "sustainable" green revolution, so as to address the underlying structural determinants, build resilience and contribute to food security in the long term.

Box 1
Strategic framework for improving food security

The twin-track approach can provide an overall strategic framework for improving food security. This framework includes equally critical and mutually reinforcing short-term and long-term measures and is highly relevant in the current context of high food prices. One track aims to promote the supply response of the agricultural sector, particularly among smallholders, and the development of rural areas through appropriate incentives and investments in public goods. The objective is to increase food supplies and to enhance the income-generating capacity of agriculture and the rural economy as a means of promoting overall rural development. The other track aims to ensure immediate access to food by the poor and vulnerable in both rural and urban areas by providing safety nets and social protection measures.

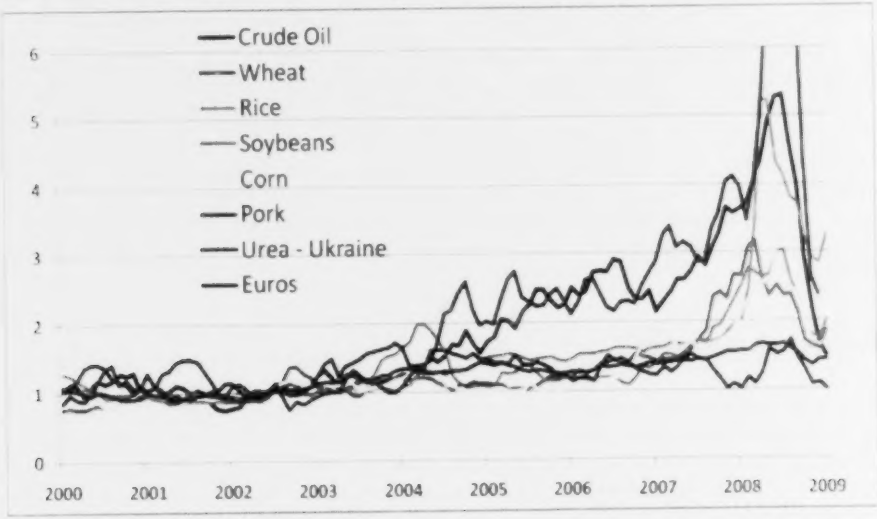
Source: FAO, *Food Outlook 2008*, Rome, November 2008.

II. Food security situation: an overview

A. The 2008 crisis and its aftermath

6. Even before 2008, world food insecurity was at an unacceptable level, as an estimated 963 million people (or one seventh of the world population) were undernourished. However, the situation has reached crisis proportions because of the rapid escalation of the price of food and other commodities in 2008 (see figure below). For the first time in human history, there are more than 1 billion undernourished people — 1.02 billion, to be exact, equivalent to one sixth of the world's population.[2] Today, the prevalence rate of hunger exceeds 35 per cent in 16 countries in Africa, and external assistance is needed routinely by 30 countries — 20 in Africa and 10 in Asia — to overcome food insecurity resulting from natural disasters, conflict or insecurity, and economic downturns.[3] With the 2015 date for the Millennium Development Goals[4] drawing closer, progress in attaining hunger and poverty reduction targets, which was already somewhat mixed, has been dealt a severe setback, and a reversal of progress has taken place in particular with respect to Millennium Development Goal 1 (eradicating extreme poverty and hunger through, inter alia, reducing by half the proportion of people who suffer from hunger).

Food and commodity prices 2000-2009



Source: Farm Foundation (2009).[5]
Note: Commodity prices and indices are normalized to equal 1.0, on average, for 2002.

[2] FAO Newsroom, 19 June 2009: "1.02 billion people hungry: one sixth of humanity undernourished — more than ever before", available at http://www.fao.org/news/story/en/item/20568/icode/.

[3] Ibid.

[4] For detailed information, see http://www.undp.org/mdg/.

[5] Farm Foundation (2009), *What's Driving Food Prices*, Issue Report, March 2009 update; available at www.farmfoundation.org.

7. Commodity prices are notoriously volatile. However, notwithstanding short-term fluctuations, the long-term real price of food and other primary commodities showed a slight but steady decline over much of the twentieth century, interrupted by spikes during three exceptional periods — the two world wars and the commodity price shocks of the 1970s. As shown in the figure above, 2008 may be viewed, in retrospect, as the fourth such exceptional period; it saw a dramatic surge in the prices of all food grains, with wheat and corn doubling and rice tripling in price in less than two years, as well as in the prices of other key commodities, especially oil.

8. Analysts attribute the 2008 price surge to a combination of factors. First, although food demand has grown steadily because of a sustained economic boom and the especially rapid growth in China and India, prices remained low because of the high global grain stocks between 1998 and 2005. After 2005, however, grain and oilseed stocks were depleted rapidly because of a succession of poor harvests (in large part because of back-to-back droughts in Australia, one of the largest agricultural exporters in the world, in 2006 and 2007) and a large increase in biofuels production in the United States of America, mostly from corn used in ethanol. At the same time, the increase in vegetable-oil prices was the result of an increase in imports of vegetable oil and its use in ethanol in the European Union.[6] Production costs also rose because of higher energy and fertilizer prices and a declining dollar. Finally, prices were pushed up by subsequent export restrictions and commodity market speculation. Besides the short-term factors, experts also point to the chronic underinvestment in agriculture that has prevailed since the 1980s.

9. In the aftermath of the crisis, experts feared a recurrence in 2009 because of the potential impact of the financial crisis. There were fears that credit and liquidity could be squeezed during the sowing season (thus reducing planting by farmers who rely on loans to finance agricultural inputs), and that a shortfall in trade credit could affect demand for agricultural products from manufacturers, processors and producer cooperatives.[7] However, those fears have not been validated by subsequent data, and the outlook for world cereal supply and demand in 2009-2010 appears to be satisfactory, reflecting adequate planting, large carryover stocks and stagnant demand.[8]

B. Impact of the crisis

10. That price surge created a severe hunger crisis, as poor families, which were already spending as much as half of their incomes on food, were no longer able to afford adequate nutrition. Of particular concern is the situation of vulnerable countries — the least developed countries, the landlocked developing countries and the small island developing States — and vulnerable social groups, including women, children, the elderly and poor households.

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[6] *Policy Research Working Paper*, No. 4682, "A note on rising food prices", by Donald Mitchell, World Bank, July 2008.

[7] Agro-food processors that often extended credit and accepted payment in future crop production have ceased this practice in many countries and Governments, for the most part, have not stepped in to provide credit or extension services to increase productivity. See *OECD-FAO Agricultural Outlook 2009-2018*, available at http://www.agri-outlook.org/dataoecd/2/31/43040036.pdf, p. 47.

[8] See *OECD-FAO Agricultural Outlook 2009-2018*, available at http://www.agri-outlook.org/dataoecd/2/31/43040036.pdf

11. Undernutrition is associated with a number of adverse impacts. One in three developing-country children under 5 years of age — a total of 178 million children — suffers stunting owing to chronic undernutrition and a poor-quality diet. Such children therefore have higher rates of illness and death, reduced cognitive ability and school performance, and lower adult productivity and lifetime earnings. Micronutrient malnutrition, including deficiencies of iron, protein, vitamin A, iodine and zinc, also known as "hidden hunger", affects more than 2 billion people — over 30 per cent of the world's population — and has serious public-health consequences.

12. The revival of food production and the replenishment of grain and oilseed stocks, combined with the trend reversal with respect to other factors that had contributed to the price surge — for instance, energy prices declined, the dollar regained some of its value, economic growth slowed down globally as well as in emerging economies, and some of the policies favouring biofuels were retired — have resulted in a sharp decline in food prices.

13. However, concerns remain. International grain prices are still 25 per cent higher than in 2005,[9] food prices in developing countries have not fallen as much as international prices,[10] and the outlook for the underlying factors is far from clear. Energy prices remain volatile, the trend value of the dollar is uncertain, demand for and supply of biofuels is rising, and the global economy may soon recover from the recession, thus stimulating demand once again. As a result, the international food system remains vulnerable.

14. Although prices have declined, the global economic recession is pushing households back into poverty and therefore sustaining food insecurity. This has affected the food security agenda in at least five ways. First, prices of developing-country exports are declining; agricultural raw materials prices are projected to fall by 15 per cent in 2009, and prices of metals and minerals by 26 per cent. Secondly, developing-country exports are projected to shrink by 2 to 3 per cent as global trade volumes contract by 9 per cent in 2009. Thirdly, financial inflows to developing countries are falling — foreign direct investment by 40 per cent, remittances by 5 to 8 per cent,[11] and official development assistance, which had already declined by 7 per cent in 2007, may fall further; official development assistance for agriculture had declined by 75 per cent between 1980 and 2005. Fourthly, per capita incomes are growing more slowly, or even falling; as global economic activity declines by about 1 per cent in 2009, the average developing-country growth rate will fall from 6 per cent in 2008 to 2 per cent in 2009. Finally, unemployment rates are rising, both as a result of the recession and because of reverse migration from industrialized countries.

C. Longer-term considerations

15. As noted above, the 2008 crisis was the result not only of a short-term confluence of factors, but also of the longer-term structural features of the food and agriculture sector. The current trends highlighted above suggest that, with regard to

[9] FAO, *The State of Agricultural Commodity Markets* (draft), Rome, December 2008.

[10] Ibid.

[11] World Bank, Migration and Development Brief of 23 March 2009; available at http://siteresources.worldbank.org/INTPROSPECTS/Resources/MD_Brief9_Mar2009.pdf.

many of those factors, there will be steady movement in an adverse direction. This poses additional policy challenges, and anticipatory action might be necessary.

Lack of investment

16. The most important factor is the chronic underinvestment in agriculture. In most countries, the level of investment in agriculture has declined since the 1980s. This is also reflected in a decline in the share of official development assistance for agriculture. The advocacy group Oxfam has called for raising official development assistance for agriculture, currently at $5 billion per year, at least to its 1980s level of $20 billion. The International Food Policy Research Institute has called for a doubling of public research and development in agriculture.

17. In most developing countries, agricultural research investments are stagnating or declining. The privatization of agricultural research in developed countries restricts access to proprietary technologies, limiting the possibility of capturing research spillovers from developed countries. In addition, many countries lack even a minimal national capacity for procuring, assessing, adapting and adopting scientific knowledge and technologies developed elsewhere. The need for increased and stable funding for agricultural research and extension is therefore crucial.

Small farmers

18. More broadly, of particular concern in this regard is the inadequate support provided to small farmers. The vast majority of the world's farms are small; 85 per cent of them are less than 2 hectares, and 97 per cent less than 10. In Africa, 80 per cent of farmed land is cultivated by smallholder farmers, the majority of whom are women.[12] Globally, the livelihoods of 2 billion people depend on the production capacity of the estimated 500 million small farms worldwide.[13] Yet smallholder farmers face a variety of constraints to sustainable livelihoods, including a lack of access to natural resources and agricultural inputs, poor advisory and other support services, fragile environments, remote locations, and weak community organization and political leverage. They often lack the necessary capacities to adapt to or reap the benefits of new technologies. This makes them highly vulnerable to shocks, including price volatility, health risks and natural hazards, and to climate variability.

19. Poverty is partially determined by constraints that limit farmers' ability to enter and compete in national, regional and global markets. The development of, and access to, markets requires a complex set of conditions involving not only farm production technology and transport infrastructure, but also — and especially in agriculture — the coordination of many different activities, services and institutions, including rural finance, input supply, assembly and distribution, grading, processing and retailing. In much of the world, those activities need to be sustained within the context of markets that are often volatile and unpredictable, in countries where there are weak governance and policy mechanisms for upholding the contracts, and in cultures where business trust is often heavily dependent upon personal relationships or kinship ties. Because of those challenges, as well as the usual risks and uncertainties associated with agricultural production itself, the private sector is often reluctant to invest in the complementary goods and services needed to link rural

[12] IFAD press release, 10 July 2009, available at http://www.ifad.org/media/press/advisory/2009/09.htm.

[13] IFAD press release, 18 February 2009, available at http://www.ifad.org/media/press/2009/9.htm.

producers with urban markets. In places where private agribusiness is more developed, poor producers often face unfavourable prices due to a lack of bargaining power, high transaction costs and difficulties in meeting quality standards.

Competing demands on resources

20. While global food demand continues to rise because of population growth as well as a change in consumption patterns resulting from income growth, the growth trend in agricultural productivity is too slow to keep up with demand. World population is projected to grow from 6.5 billion in 2005 to more than 9 billion by 2050, and indications are that the increase will take place entirely in developing countries.[14] Food production will have to at least double in order both to achieve food security for more than 1 billion hungry people and to ensure adequate food supplies to feed the additional population.[15]

21. However, there is not an infinite supply of the two main resources, water and land. There is at most 12 per cent more arable land available which is not forested or subject to erosion or desertification, and degradation of soils continues. Similarly, large areas of the world are already water-stressed, and further increases in water availability for agriculture cannot be ensured.[16]

22. More importantly, there is a demand for these two critical resources for other purposes as well, namely afforestation and non-food crops, in particular biofuels. Forested areas will need to expand rather than shrink, both to protect biodiversity and to address climate change. The demand for non-food crops will also increase along with population and income growth. The growing demand for biofuels as an alternative to fossil fuels is also beginning to divert land and water resources from food production. This juxtaposition of finite natural resources, steadily growing demand and competing uses calls for consensus policies on resource use as well as for a focused investment in productivity enhancement.

23. The rise in petrol prices has made biofuels an attractive alternative energy source. The potential demand for energy is so large that it could change the fundamentals of agricultural systems. Indeed, this may already have started to happen. In 2007, nearly 100 million tons of cereal, or 5 per cent of world output, were diverted from food markets to the energy sector,[17] but contributed less than 0.5 per cent in terms of meeting the global energy demand. The International Food Policy Research Institute has projected that if biofuel development proceeds at or exceeds its current pace, by 2020 per capita calorie availability will decline and child malnutrition will increase substantially, particularly in sub-Saharan Africa.[18]

24. There is also a competition between domestic and export demand. Fears of future scarcities have led to large-scale land acquisitions by foreign countries and Governments. These generate investments but also increase the risk of future food

[14] United Nations press release, "World population will increase by 2.5 billion by 2050", 13 March 2007, available at http://www.un.org/News/Press/docs/2007/pop952.doc.htm.

[15] Robert L. Thompson, "Malthus has been wrong for two centuries, but will he be in the 21st?: agricultural research holds the key", Centre for Global Development, University of Illinois at Urbana-Champaign, http://cgs.illinois.edu/category/global-studies/agriculture-0.

[16] Ibid.

[17] FAO, 2009.

[18] See http://www.ifpri.org/themes/bioenergy/bioenergy.asp.

insecurity for the poor, as many countries do not have sufficient mechanisms to protect local rights and interests, especially those of women and indigenous peoples. A recent study undertaken by IFAD, FAO and the International Institute for Environment and Development[19] indicates that land-based investments have been rising over the past five years, with foreign investments dominating the trend but with significant domestic investment as well.

25. A third area of competition is water. In most developing countries, agriculture uses more than 80 per cent of water resources.[20] Competition for water from cities and industries progressively reduces water allocation for agriculture and puts additional pressure on food production. At the same time, many large irrigation infrastructures are old and inefficient and do not allow for a much-needed increase in agricultural water productivity.

Climate change

26. A final complicating factor is climate change, which could affect resource availability as well as factor productivity, notably through higher temperatures, greater rainfall variability and more frequent extreme weather events, such as hurricanes, floods and droughts. Climate projections indicate a potential for abrupt changes in rainfall patterns, greater frequency of droughts as well as floods, higher levels of moisture evaporation, loss of coastal lands, intrusion of salt water, migration of pest vectors, an increase in plant and animal diseases, and generalized adverse impacts on crop productivity.[21] By 2020 almost 50 million more people may be at greater risk of hunger as a direct consequence of climate change.[22] Rising global food prices could push that number much higher.

27. A potential grave outcome of the physical impacts of climate change is conflict over scarce land and water resources — within and among rural communities, and even among nations — and the migration of poor rural people from overstressed regions, which could export conflicts to other areas. The final impacts will depend on the level and types of investments that are made to improve agriculture's adaptive capacity and resilience and to adjust production methods to help mitigate climate-change effects.

III. Responding to the food security crisis and agricultural development challenges

28. The response to the food security crisis has therefore sought to address both of the dimensions noted above: the immediate need to ameliorate the condition of households and populations facing hunger and undernutrition, and the longer-term need to build resilience and overcome the structural conditions that perpetuate food insecurity. These responses are described below in four broad dimensions: a strategic framework for action; global actions; regional actions; and national actions.

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[19] See http://www.ifad.org/pub/land/land_grab.pdf.

[20] IFAD, "Linking land and water governance" (2006); available at http://www.ifad.org/events/water/flyer.pdf.

[21] FAO, 2009.

[22] United Nations Environment Programme, "Millions at risk of hunger and water stress in Asia unless global greenhouse emissions cut", 10 April 2007; available at http://www.unep.org/Documents.Multilingual/Default.asp?ArticleID=5551&DocumentID=504&l=en.

A. A strategic framework for action

29. The 2008 food crisis galvanized the global policy community in mobilizing political and financial support for ameliorative and constructive action. From the very outset, that action was based on a strategic framework developed under the auspices of the United Nations High-level Task Force on the Global Food Security Crisis. The Task Force was established in April 2008 to enable the United Nations system to adopt a coordinated, consolidated and coherent approach in its responses to the food security crisis.

30. In July 2008, the Task Force published the Comprehensive Framework for Action, which defines the common position of its members on the actions to be implemented in the short, medium and long term to deal with the crisis and to improve food and nutrition security at the national, regional and global levels.[23] The key contribution of the framework is the demarcation of two strategic areas of intervention, involving actions aimed, respectively, at addressing the immediate needs of vulnerable populations and at building resilience and contributing to global food and nutrition security. The framework makes it clear that both sets of actions are needed urgently, and it also advocates the strengthening of global information and monitoring systems.

31. With respect to the first track, the framework proposes (a) the enhancement of emergency food assistance, nutrition interventions and safety nets; (b) the boosting of smallholder farmer food production; (c) the adjustment of trade and tax policies; and (d) the management of macroeconomic implications. Similarly, on the second track, it advises that (a) social protection systems should be expanded; (b) smallholder farmer-led food availability growth should be sustained; (c) international food markets should be improved; and (d) an international biofuel consensus should be developed.

32. Subsequent policy decisions and global agreements have further refined and developed this comprehensive framework, most recently the agreement reached in May 2009 at the seventeenth session of the Commission on Sustainable Development on the implementation of the sustainable development agenda in six thematic areas: agriculture, rural development, land, drought, desertification and Africa.

33. The Commission endorsed the strategic twin-track approach advanced by the Comprehensive Framework for Action and reiterated the framework recommendations on the first track (pertaining to the immediate needs of affected populations), especially the call for emergency food assistance and safety nets as well as support for small farmers. Furthermore, it called for such actions to be incorporated into an integrated approach that builds longer-term response capacity.

34. The Commission goes beyond earlier policies, including the Comprehensive Framework for Action, in developing this integrated strategic framework and in incorporating all actions into a strategy for building long-term resilience and addressing structural obstacles in a sustainable and equitable manner. It proposes a strategy that combines economic incentives and market development, an investment agenda, actions to promote environmental sustainability and integrated resource management, and social protection.

[23] Available at http://www.un.org/issues/food/taskforce/Documentation/CFA%20Web.pdf, pp. 5-26.

35. The salient features of this strategic framework include three sets of national actions (sustainable development strategies, a sustainable green revolution and social strategy), and four areas of international cooperation (financing; enhanced access to international markets, including through trade policy and assurance of price stability; cooperation in research and development; and enhancing policy coherence), as set out below.

National actions

36. The following national actions have been identified:

(a) *Sustainable development strategies*: the Commission, at its seventeenth session, urged Governments to incorporate the elements of the response to the food security agenda into the broader framework of national sustainable development strategies and poverty reduction programmes. This has a number of implications:

(i) *Participatory process*: national strategies involve a broad spectrum of stakeholders and major groups in the policy formulation process, through time-tested mechanisms;

(ii) *Sustainable resource management*: key existing programmes should be incorporated into the national strategies (and new programmes formulated where needed). These include, besides the core strategy of a sustainable green revolution, integrated strategies for sustainable land and water management, adaptation to drought, combating desertification, and improved monitoring (especially to reverse land degradation). Finally, it asks for the examination of the challenges as well as opportunities of biofuels in the context of sustainable development (including food security, energy security, and integrated resource management);

(iii) *Comprehensive rural development strategies*: these include building social capital, disseminating knowledge of best practices and market access, building social infrastructure and services, and creating employment opportunities;

(iv) *Policy instruments*: besides national sustainable development strategies, use of a number of policy tools — including assessment mechanisms (environmental impact assessments, social impact assessments, and strategic environmental assessments), valuation methods, ecological taxation, and monitoring systems — associated with sustainable development;

(v) *Climate change*: research and development on technical solutions as well as traditional knowledge of drought-tolerant seed varieties, drought forecasting, impact assessment, and early warning systems. Investment in agriculture can help in the mitigation of climate change;

(b) *Sustainable green revolution*: a green revolution that revitalizes agricultural sectors in developing countries by enhancing agricultural production, productivity and sustainability through the use of science-based approaches and local indigenous knowledge in a manner that protects and conserves natural resources, limits the use of scarce inputs and pollutants, and enhances the quality of natural resources. Key elements of the strategy are:

(i) *Investment in agriculture*: the reiteration of earlier decisions on increasing the share of investment in agriculture to 10 per cent of the total, in

particular, enhancing investment in (a) agricultural infrastructure; (b) research and development on crops as well as livestock, including sustainable as well as climate-friendly practices and incorporating indigenous knowledge; and (c) agricultural institutions, especially extension institutions, using modern information and communications technologies, and institutions for planning and monitoring;

(ii) *Support for market integration*: a number of actions to enable better access by small farmers and local entrepreneurs to national and global markets;

(iii) *Special programme for Africa*: the green revolution of the 1960s and 1970s largely bypassed Africa. Support for the Comprehensive Africa Agriculture Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD) is needed to ensure that this time the continent will benefit from the latest scientific research, and not at the expense of ecological services, cultural arrangements or indigenous knowledge. It includes higher investment in agricultural infrastructure, institutions, research and development, education and extension, and rural development, in order to integrate African farmers and local entrepreneurs into agricultural supply chains and global trade. Also needed are the reduction of the debt burden, addressing income distribution and promoting rural development, and support for climate adaptation;

(c) *Social strategy*: as an integral element of the national sustainable development strategy and as a complement to the sustainable green revolution programme, the social strategy seeks to provide social protection through policy measures, infrastructure investment and institutional development and capacity-building in four areas:

(i) *Social protection*: investment in basic social services (health and education) for farming communities, building institutions for social protection, recognizing and giving substance to the right to food, ensuring food quality, improving information provision and insurance, strengthening the capacity for disaster management, and building capacity for effective risk management;

(ii) *Enhanced support for small farmers*: technical assistance to small farmers and women farmers;

(iii) *Land tenure protection*: secure and equitable access to land and land tenure is a key component of a sustainable agricultural strategy. It is also essential to protecting poor and vulnerable groups and enhancing the role of rural women (both to raise agricultural production and to ensure household food security);

(iv) *Social capital and scaling up of best practices*: a number of "best practices" have failed to be utilized on a significant scale. These include, for example, measures for soil and water conservation, decreasing post-harvest losses (which can be as high as 30 per cent), integrated pest management, community development and social mobilization, and benefiting from market opportunities. Appropriate policy and extension measures can take these practices to scale.

International cooperation

37. The following areas of international cooperation have been identified:

(a) *Financing*: the Commission, at its seventeenth session, called for donors to meet all earlier official development assistance commitments and to provide adequate, predictable and timely financial resources for a sustainable green revolution, with a particular emphasis on Africa (including a reduction of the debt burden), the programme of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (including support from the Global Environment Facility), countries undertaking governance reforms, support for sustainable consumption and production patterns and the mainstreaming of sustainable agriculture strategies, as well as climate change strategies and actions, into poverty-reduction strategies and national development programmes;

(b) *International trade and price stability*: the Commission also called for a successful and timely conclusion to the Doha Round and for the promotion of an equitable multilateral trading system;

(c) *Cooperation in research and development*: the outcome of the session also includes a number of decisions to support research and development, with particular reference to the research capacities of developing countries in rural development and sustainable agriculture (including organic agriculture, sustainable biobased products, the management of invasive species, and land resource systems), information and monitoring systems (e.g., utilizing climatic information, including before, during and after drought, and guidelines for the development of drought indices), international agricultural research systems (especially the Consultative Group on International Agricultural Research system), and the exchange and transfer of information on technologies and best practices;

(d) *Policy coherence*: the Commission called for enhancing coherence between and within various instruments of international cooperation, better coordination and coherence among the United Nations agencies, including among the three Rio Conventions, and for effective follow-up on the implementation of the decisions taken at the Commission's seventeenth session.

38. Taken together, these decisions provide a coherent and manageable framework for addressing both strands of the food security agenda. The actions taken thus far towards translating this vision into reality are set out below.

B. Actions taken at the global level

39. Food security and sustainable development remain high on the international political agenda. Many Governments, donors and development partners have undertaken new commitments to re-engage in the agricultural sector, increase investments in agriculture and rural development and enhance food production to achieve food security and improve nutrition for all. However, the results achieved thus far have not been sufficient to attain the agreed goals. As called for by the General Assembly in its resolution 63/235, these efforts are briefly reviewed in the present report, together with an analysis of their impact, where possible.

Meeting financing needs

40. The FAO High-level Conference on World Food Security: the Challenges of Climate Change and Bioenergy, held in June 2008, estimates the total annual needs for achieving agricultural development and food security to be of the order of $30 billion, including (a) $2.9 billion per year for improving agricultural productivity and enhancing livelihoods and food security in poor rural communities; (b) $9.5 billion per year for developing and conserving natural resources; (c) $10 billion per year for expanding rural infrastructure (including capacity for food safety, plant and animal health) and broadening market access; (d) $1.43 billion per year for strengthening the capacity for knowledge generation and dissemination; and (e) $6.6 billion per year for ensuring access to food for the neediest through safety nets and other direct assistance.

41. Although the Conference was not intended to be a pledging event, several donor countries and international financial organizations announced significant additional financial support totalling more than $12 billion.

42. As a follow-up, the Government of Spain hosted a High-level Meeting on Food Security for All in Madrid in January 2009. The meeting envisioned a framework for a global partnership for food security; brought together Governments, regional bodies, civil society, businesses, international agencies, development banks and donors; and also led to financial pledges. As of June 2009, Spain had made good on its first commitment of €1 billion for 17 West African countries. However, concerns remain that other pledges have yet to materialize.

43. In July 2009, the Group of Eight, meeting in L'Aquila, Italy, recognized that the combined effect of long-standing underinvestment in agriculture and food security, price trends and the economic crisis have led to increased hunger, and agreed to commit more than $20 billion to agriculture over the next three years as part of a food security initiative,[24] in addition to pledging formally to reverse the tendency of decreasing official development aid and national financing to agriculture.[25]

44. The FAO Council decided to organize a World Summit on Food Security from 16 to 18 November 2009 in order to revisit earlier commitments and keep the challenge of food insecurity at the top of the international agenda.

The United Nations system: implementing the Comprehensive Framework for Action

45. Over the past 12 months, members of the High-level Task Force have provided support to national authorities on both strands of the Comprehensive Framework for Action, namely, safety nets and food assistance, as well as longer-term support to improve production and increase resilience to price volatility and external shocks. Some of the actions taken are outlined below:[26]

[24] See http://www.un-foodsecurity.org/node/22.

[25] *Financial Times*, 6 July 2009, available at http://www.ft.com/cms/s/0/60720902-6992-11de-bc9f-00144feabdc0.html.

[26] Outline of progress against the July 2008 Comprehensive Framework for Action, High-level Task Force secretariat, July 2009.

(a) FAO and IFAD assisted small farmers during the fall planting seasons and are supporting programmes aiming at strengthening their capacities. FAO has been promoting national and regional programmes for food security since 2002 as instruments that help countries enhance productivity and diversify the livelihoods of rural people on a scale sufficient to attain the 2015 targets set by the World Food Summit and the Millennium Development Goals;

(b) WFP organized what is perhaps the largest ever emergency scale-up of food assistance operations, reaching over 100 million people. The organization is now increasingly purchasing locally produced food for its operations and school feeding programmes (the "Purchase for Progress" initiative);

(c) The World Bank has intensified investment operations through a Global Food Crisis Response Programme with a focus on the rapid disbursement of assistance so as to address immediate needs through budget support, social protection programmes and support for the agricultural sector. A total of $780 million (70 per cent of approved funds) has been disbursed within a year;

(d) The United Nations Children's Fund has intensified its focus on responses to the nutritional impact of the combined food and economic crises;

(e) The United Nations Development Programme has helped Governments to address the critical interrelationships among food systems, social protection, rural development and poverty reduction; and also, as the coordinating agency, responses in selected countries;

(f) The Office for the Coordination of Humanitarian Affairs has set aside $100 million within the Central Emergency Response Fund to respond to the food crisis;

(g) The International Monetary Fund plugged balance-of-payment gaps for low-income countries suffering from food price shocks and provided advice on appropriate macroeconomic policy responses;

(h) The High-level Task Force secretariat assisted in the leveraging of donor funding, including support for the establishment of the €1 billion European Union Food Facility, supporting country-level coordination in 35 of the 60 countries on which the Task Force focuses;

(i) The World Trade Organization and the United Nations Conference on Trade and Development are providing a platform for discussion and action on the elimination of distorting subsidies, which is essential for the establishment of a fair trade environment for poor countries;

(j) The International Labour Organization has drawn attention to the creation of jobs, occupational safety nets and health, entrepreneurship and issues of child labour and gender rights as essential elements of an integrated strategy for food security and sustainable agricultural development;

(k) Members of the High-level Task Force have begun to incorporate a "rights perspective" in this agenda, with reference to the Right to Food Guidelines (*Voluntary Guidelines to Support the Progressive Realization of the Right to*

Adequate Food in the Context of National Food Security), and the appointment of a Special Rapporteur on the right to food;[27]

(l) Finally, as noted in paragraph 34 above, the seventeenth session of the Commission has provided an integrated framework for pursuing the food and agriculture agenda in a sustainable and equitable manner.

C. Regional initiatives and actions

46. A number of actions in support of the agenda have been undertaken by regional institutions.

Africa

47. The NEPAD-coordinated Comprehensive Africa Agriculture Development Programme is an Africa-owned and Africa-led initiative to eliminate hunger and reduce poverty through investment in agriculture. African Governments agreed, under the Maputo Declaration on Agriculture and Food Security in Africa, to increase public investment in agriculture to a minimum of 10 per cent of their national budgets and achieve the target of increasing agricultural growth to 6 per cent per annum. This is to be achieved on the basis of four key pillars: extending the area under sustainable land management; improving rural infrastructure and trade-related capacities for market access; increasing food supply and reducing hunger; and investing in agricultural research, technology dissemination and adoption.[28]

48. NEPAD, the regional economic communities, the African Union and a number of African and donor Governments are working together to mobilize support for the CAADP Multi-donor Trust Fund, hosted at the World Bank.

49. In preparation for the seventeenth session of the Commission on Sustainable Development, African ministers convened a high-level meeting on the theme "African agriculture in the twenty-first century" in February 2009 in Windhoek. The meeting called for a sustainable green revolution in Africa and the integration of African agriculture into global markets. It also addressed climate adaptation, support for small-scale and women farmers, securing market access and capacity-building.

50. The thirteenth ordinary session of the African Union Assembly of Heads of State and Government, held in Sirte, Libya, in July 2009 addressed the theme "Investing in agriculture for economic growth and food security" and featured renewed commitments to CAADP as well as discussions on climate change, regional agriculture trade, investment financing and pro-poor initiatives for rural development.

Asia-Pacific

51. In December 2008, the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Government of Indonesia convened a high-level policy dialogue on the theme "The food-fuel Crisis and climate change: reshaping the

[27] Ibid.

[28] CAADP annual report 2008, available at http://www.caadp.net/pdf/CAADP%20Annual%20report%202008.pdf.

Development Agenda". More than 100 policymakers called for regional cooperation to support countries facing balance-of-payments difficulties.[29]

52. In August 2008, in Chiang Mai, Thailand, the Ministers of Agriculture of the member countries of the Association of Southeast Asian Nations (ASEAN) discussed an ASEAN integrated food security framework specifying policy responses in four areas: strengthening food security, promoting better food markets and trade, strengthening integrated food security information systems, and agricultural innovation. That same month, the fifteenth summit of the South Asian Association for Regional Cooperation (SAARC) issued the Colombo Declaration on Food Security, which called for a road map for agriculture development and food security and the preparation of the SAARC Agriculture Perspective 2020. It also directed the operationalization of a 2-million-ton SAARC food bank to provide a regional reserve during food emergencies.

Latin America

53. In the rural areas of the Common Market of the South (MERCOSUR) countries (Argentina, Brazil, Paraguay and Uruguay), the poorest and most vulnerable people are landless peasants, poor smallholder farmers, women, young people and ethnic minorities.[30] IFAD, in collaboration with Governments and farmers, has contributed to the development of the Commission on Family Farming MERCOSUR, the regional platform of family farmers' organizations, and a model for policy dialogue and South-South cooperation. Many of the interventions seek to increase investment in agriculture and rural development across all aspects of the production cycle; strengthen national capacities for policy response to rural poverty; foster private-sector involvement in agricultural services; and promote agricultural research.

D. Actions implemented at the national level

54. Considerable evidence shows that it is possible to increase crop yields of smallholder farmers, reduce poverty and enhance food security through concerted national agricultural and rural development programmes (see box 2). In India, cereal yields are 2.5 times greater than they were 40 years ago, and China doubled crop yields on smallholder agriculture in a decade and helped to move 400 million people out of poverty. Smallholders in Viet Nam transformed that country from a net importer of rice to one of the world's biggest exporters. In Africa, between 2003 and 2005, 13 countries achieved annual agricultural growth rates greater than 5 per cent.[31]

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[29] *Sustainable Agriculture and Food Security in Asia and the Pacific*, ESCAP, 2009, available at http://www.unescap.org/65/documents/Theme-Study/st-escap-2535.pdf.

[30] "IFAD in the MERCOSUR area", IFAD, December 2008, available at http://www.ifad.org/operations/projects/regions/PL/factsheet/mercosur_e.pdf.

[31] International Food Policy Research Institute, Policy Brief No. 009, "Sustaining and accelerating Africa's agricultural growth recovery in the context of changing global food prices" (November 2008); available at http://www.ifpri.org/PUBS/bp/bp009.asp.

Box 2

Examples of successful sustainable agriculture practices

Africa

- *Burkina Faso*: Soil and water conservation in the drylands have reduced land degradation and increased crop yields. The average farm family shifted from a cereal deficit of 650 kg to a surplus of 150 kg per year
- *Kenya*: Soil fertility management using a range of biological pest-management methods together with legumes, cover crops and green manures have doubled beans and groundnut yields from 300 to 600 kg/hectare (ha)
- *Nigeria*: Alley crops of *Gliricidia* and *Leucaena* reduced soil erosion by 73 and 83 per cent, respectively
- *Ethiopia*: In low-rainfall areas, reduced tillage without chemical fertilizer increased gross crop revenue by $106 per hectare compared with conventional tillage without chemical fertilizers, and $13 per ha compared to conventional tillage with chemical fertilizers. The impact was less significant ($6 per ha) in high-rainfall areas

Asia

- *Viet Nam*: Contour planting of hedgerows on sloping lands reduced soil loss from 18 to 7.4 tons/ha/year
- *Pakistan*: Yields of citrus fruits increased by 150 to 200 per cent after the adoption of such sustainable agriculture practices as mulching, no-till production and composting

Latin America

- *Honduras and Guatemala*: 45,000 families have increased crop yields from 400 to 600 kg/ha to 2,000 to 2,500 kg/ha using green manures, cover crops, contour grass strips, in-row tillage, rock bunds and animal manures
- *Brazil*: Soil and water conservation using contour grass barriers, contour ploughing and green manures has raised maize yields from 3 to 5 tons/ha and soybeans from 2.8 to 4.7 tons/ha in Santa Catarina, Paraná and Rio Grande do Sul
- *Bolivia (Plurinational State of)*: Some 2,000 farmers have improved potato yields from 4 to 10-15 tons/ha by using green manure

Sources: Pretty et al. 2003; Graves et al. 2004, Kassie et al. (2008 and 2009), Third World Network, 2008, International Food Policy Research Institute, Policy Brief No. 009, "Sustaining and accelerating Africa's agricultural growth recovery in the context of changing global food prices" (November 2008).

55. While the entire range of recommendations regarding an integrated framework for sustainable agricultural development and food security are far from having been adopted universally, developing-country Governments are giving higher priority to incorporating food-security objectives into development strategies. A number of significant interventions are listed below.

56. With respect to tenure rights, IFAD is exploring a number of approaches aimed at increasing access to land and securing land tenure for poor rural producers. In some cases, poor producers were provided long-term access to degraded land together with support for rehabilitation. In Nepal, for example, transfers of degraded forest land on renewable 40-year leases has reduced poverty and generated reforestation of hills. Outgrower arrangements (namely, the opening up of Government-owned estate lands to former estate workers and poor farmers) in Sri Lanka have also shown promise.

57. An IFAD-supported project in Sao Tome and Principe enabled smallholder farmers to gain access to the European market for organic cocoa, and, as a result, saw their yearly income increase by an average of 30 per cent.

58. As concerns resilience to price shocks, since 2007 many countries have implemented policies aimed at mitigating the impact of higher food prices and countering the impacts of the economic recession. Those policy responses have varied in nature and effectiveness, though they generally build on existing policy measures. A FAO-led survey carried out in May 2008 of policy responses in 77 countries showed that about half the countries had reduced or eliminated cereal import duties; 55 per cent had introduced price controls or consumer subsidies; one quarter had introduced some form of export restrictions, including taxes; and roughly the same proportion had taken measures to increase supply, drawing on cereal stocks. Only 16 per cent of the countries surveyed had implemented no policy responses whatsoever.[32]

59. Similarly, an Organization for Economic Cooperation and Development (OECD) study shows similar results for non-OECD Governments, with 45 countries reducing tariffs; 31 countries imposing export restrictions; 22 countries introducing price controls; 47 countries using food subsidies or tax rebates or releasing stocks to lower prices; one fifth of the countries establishing grain buffer stocks; 3 countries scaling up existing targeted cash-transfer programmes; and 15 countries introducing donor-supported resilience packages.[33]

[32] FAO, *The State of Agricultural Commodity Markets* (draft), Rome, December 2008.

[33] *Agricultural Policies in OECD Countries: Monitoring and Evaluation 2009*.

Box 3

Policy responses to agricultural price fluctuations in selected countries

Indonesia

National action plan introduced in December 2008 to respond to the food-fuel and financial crises, including: (a) short-term: food subsidy, cash transfers, reduced import tariff, reduced value-added tax and subsidized soybean price to small processors; and (b) medium-term: subsidized fertilizers, farm credits with subsidized interest, guaranteed farm gate price, domestic food stocks.

Russian Federation

A series of measures were adopted at the beginning of 2009 to facilitate financing for agriculture: (a) budgetary funds for the capitalization of the two largest agriculture banks; (b) federal funds for subsidizing interest on agricultural loans; (c) extending the repayment periods for certain subsidized loans; and (d) including agricultural enterprises in the list of key national enterprises eligible to receive Government guarantees on borrowings.

Brazil

Increased obligatory share of sight deposits in rural banks and savings systems exclusively for agricultural lending; and increased budgetary allocations for preferential credit to agriculture.

Source: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2009.

IV. Sustainable agricultural development: the way forward

60. **The food crisis of 2008 has drawn welcome attention to the long-existing problem of hunger and food insecurity. In the past, this problem was addressed largely through fragmented, piecemeal efforts. The time has come to address it systematically, strategically and effectively.**

61. **The global policy community has produced a range of analyses and agreements that provide a way forward towards an effective and powerful response to the crisis. These range from the strategic framework advanced initially under the Comprehensive Framework for Action and refined and developed more fully by the Commission on Sustainable Development at its seventeenth session. The decision by the latter in particular sought to ensure that the response to the crisis would be integrated into mainstream decision-making and would provide synergies rather than conflicts with other crucial policy goals: poverty reduction, environmental protection, productivity enhancement, social protection and risk management, and the mitigation of and adaptation to climate change. There has been concerted support for the strategic framework, including in the form of financial pledges and the expression of commitments at the highest political levels. The task is now to convert that vision into practice.**

62. The strategic framework includes two planks — the immediate plank of ameliorating the situation of households affected by the recent series of crises, and the longer-term plank of building resilience against future shocks and ensuring the ability to sustain food security over a range of future scenarios. These two strategies are not independent from each other or from mainstream development strategies. Rather, they are of sufficient importance to be undertaken as a single comprehensive strategy.

63. The short-term actions are well known and include ensuring a sufficient food supply for poor households through social safety nets, cash transfers, price management, targeted subsidies and social empowerment. Medium- to long-term actions should promote the achievement of food security through the reinforcement of sustainable agricultural development. This includes enhanced investment in productive agricultural and rural infrastructure and the creation of an enabling environment for both public and private investment; investment in research, extension and education systems in order to make scientific knowledge and best practices available to the broader rural community, especially small farmers and women; investing in infrastructure, institutions and policies that ensure market access for farmers, especially small farmers and women, from developing countries, especially sub-Saharan Africa, as well as small island developing States and least developed countries; investing in a range of agricultural institutions, including those for agricultural policy, research, extension, education, credit and the supply of inputs, and for the sustainable management of natural resources (especially soils and water); the strengthening of oversight institutions, including those responsible for providing social safety nets, for the protection of land tenure rights, for information collection on climate, disasters, vulnerability, water, soils and poverty; investment in the social capital and collective capacity of rural communities; and investment in the technical capacity of government agencies as well as community organizations and pro-poor organizations.

64. This agenda requires concerted support from the international community in the form of stable and predictable financial support, coordinated investment in research and development and knowledge-sharing, including through the use of information and communications technology, the creation of a fair and open trading system that provides developing-country farmers with access to world markets and supply chains, technology transfer and ensuring policy coherence between various international cooperation instruments.

65. The review of the current situation presented above suggests that countries are making efforts to implement such a strategy, albeit with varying degrees of commitment and success, and still at some distance from the vision of an integrated strategy. Some of these actions are meant to intensify ongoing efforts, while others are being implemented to encounter the emerging challenges. These recommendations, rooted as they are in the outcome documents of global forums, represent the consensus view of the global community with respect to the achievement of food security, including sustainable agricultural development, and the reduction of hunger and poverty. The time has come to put this consensus vision into practice.